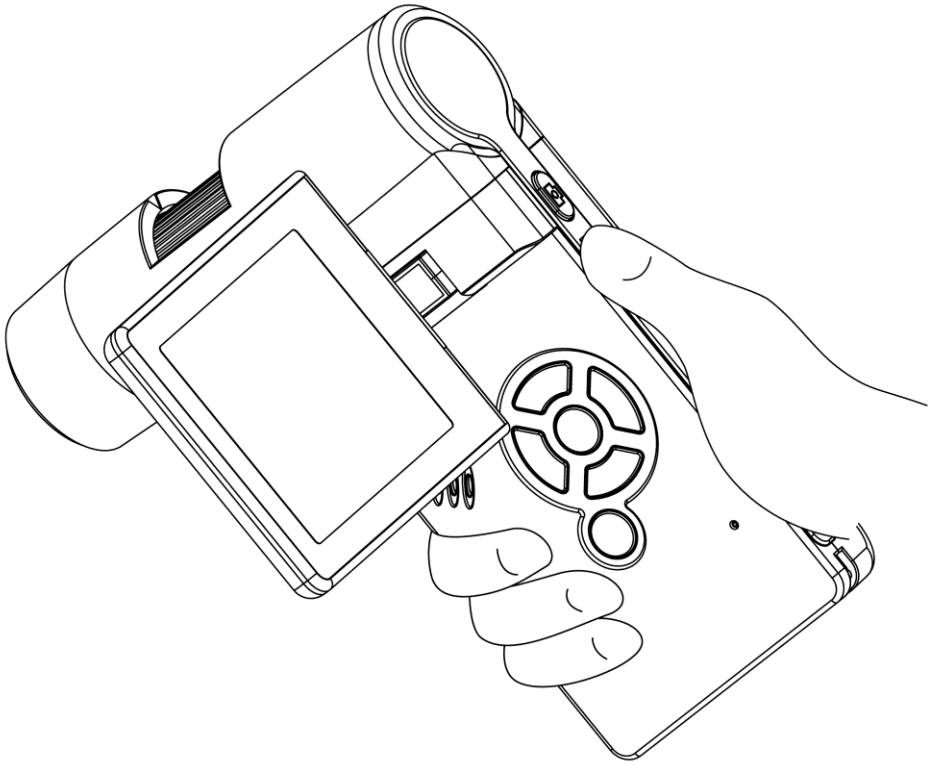
Feltest DigiMicro

FELTEST
equipment



User Manual

Contents

Welcome 3

1. Precaution 3

2. Preparation 4

3. Key Features 5

4. Use the Microscope 6

4.1 Installing the battery 6

4.2 Insert a MicroSD Card 6

4.3 Icons on the display & their meaning 7

4.4 Turn on the Microscope 7

4.5 Turn off the Microscope 8

4.6 How to Capture 8

4.7. Record Video 9

4.8. Play Back 9

4.9 Download data to a computer 10

4.10 Preview on a computer 11

4.11 Charge the battery 11

4.12 Connect to a TV 11

4.13 Mount Tripod 12

5. Menu Introductions 12

5.1 Main Menu - Image 12

5.2 Main Menu - Settings 14

6. Specifications 16

7. Computer System Minimum Requirement 16

8. Troubleshooting 17

PortableCapture Software Introduction 18

1. Install Software 18

2. Start Microscope 18

3. Software Introduction.....19
3.1 Preview Size.....19
3.2 Rotate Image.....19
3.3 Date/Time.....19
3.4 Language.....20
3.5 Full screen.....20
3.6 Capture.....20
3.7 Edit Photos.....21
3.8 Edit videos.....22
Quit MicroCapture.....22
4. Measurement in a picture.....23

Welcome

Thank you for purchasing the Feltest DigiMicro Portable Digital Microscope.

Please take a moment to read through this manual. Its contents will help you to get the best use of the smart microscope.

1. Precaution

Before using this Portable Digital Microscope, please ensure that you read and understand the safety precautions described below. Always ensure that the Feltest DigiMicro is operated correctly.

Never operate the Feltest DigiMicro where operation of such devices is restricted. Improper use creates the risk of serious accidents.

Do not try to open the case of the Feltest DigiMicro or attempt to modify it in any way. Maintenance and repairs should be performed only by authorized service providers.

Keep the Feltest DigiMicro away from water and other liquids. Do not use the DigiMicro with wet hands. Never use the DigiMicro in the rain or snow. Moisture creates the danger of fire and electric shock.

Keep the Feltest DigiMicro and its accessories out of the reach of children and animals to prevent accidents or damage to the DigiMicro.

If you notice smoke or a strange odor coming from the Feltest DigiMicro, turn the power off immediately. Take it to the nearest authorized service center for repair. Never attempt to repair the Feltest DigiMicro on your own.

The Feltest DigiMicro may become slightly warm during use. This does not indicate malfunction.

If the exterior of the Feltest DigiMicro needs cleaning, wipe it with a soft, dry cloth.

FCC Notice

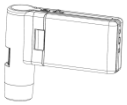
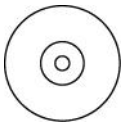
This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation.

CAUTION

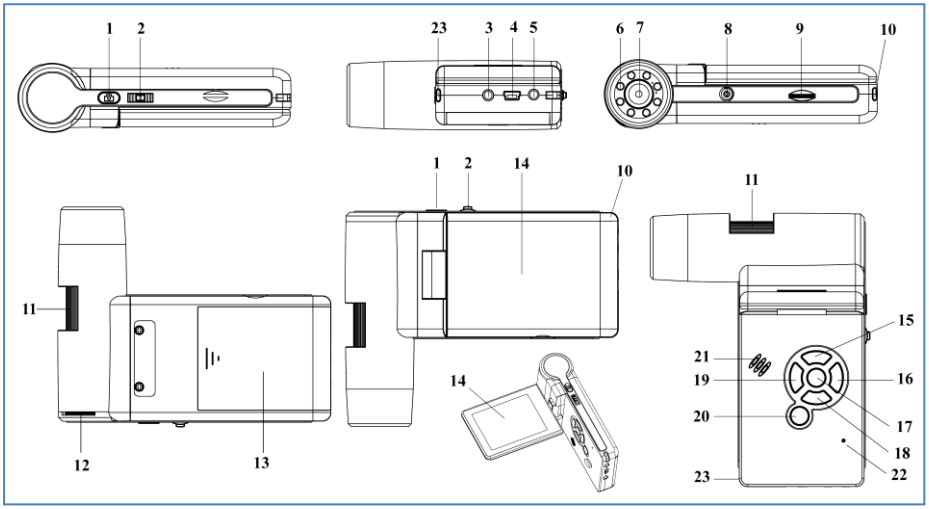
To comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules, this device, when needed, must only be connected to computer equipment certified to comply with the Class B limits.

2. Preparation

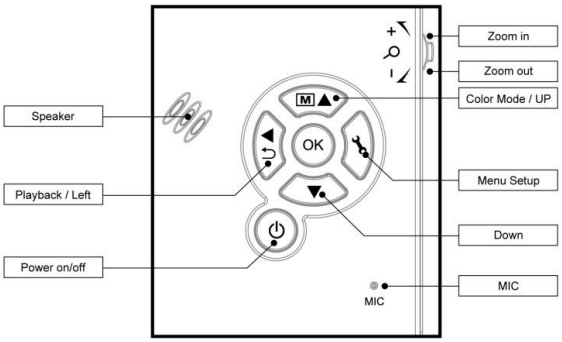
Standard accessories

			
Feltest DigiMicro	Tripod	AC adaptor	CD
USB cable	AV-cable	Manual	Carry bag

Parts, names & functions



No.	Functions		Functions
1	Capture	12	LEDs brightness dial
2	Zoom in/out; show icons on/off	13	Battery compartment
3	AV-out	14	TFT display
4	USB port	15	UP / Color mode switch
5	DC-in	16	Menu setup
6	Aux LEDs	17	OK
7	Lens	18	DOWN
8	Tripod mounting hold	19	LEFT / BACK
9	MicroSD card slot	20	Power on/off
10	Wrist grip hook	21	Speaker
11	Focus wheel	22	Microphone
		23	Battery charging indicator



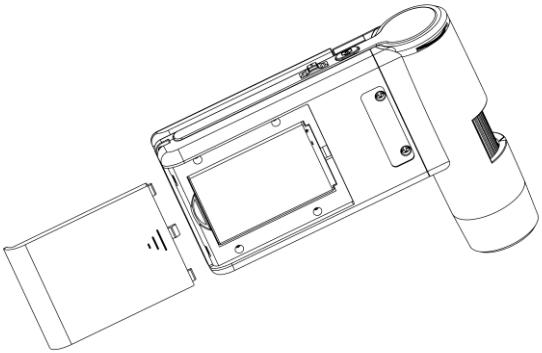
3. Key Features

- 3inches TFT panel
- 5M high quality image sensor (up to 12M by interpolation)
- 20x-200x-optical magnification and up to 500x digital magnification
- Photo & Video
- Measurement (with the supplied software on a computer)
- Support MicroSD card up to 16GB
- Driver free to download for Windows XP SP2/Vista/Win7 and Mac OS 10.4 or above (direct plug-in, driver installation not required)
- Lithium battery (rechargeable & changeable)

4. Use the Microscope

4.1 Installing the battery

1. Open the battery door by sliding it outward.
2. Insert the lithium battery to the battery compartment according to the polarities shown in the compartment.



Note: Before using the microscope, you must charge its battery. Please refer to section 4.9 on how to charge the battery.

4.2 Insert a MicroSD Card

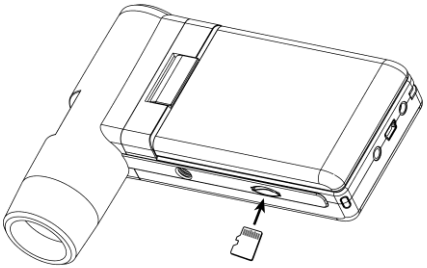
A MicroSD card must be placed to record and store your pictures and videos.

Inserting the MicroSD memory card:

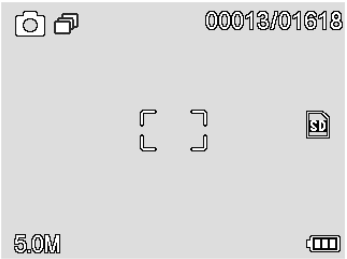
1. Turn off the microscope
2. Insert the MicroSD card into the card slot; gently press in until the card is latched.

Note: do not force the card into the slot; forcing may damage microscope and the MicroSD memory card. Align MicroSD card position (as marked) and try again. The MicroSD memory card must be formatted before starting to capture images.

See the following instruction:



4.3 Icons on the display & their meaning

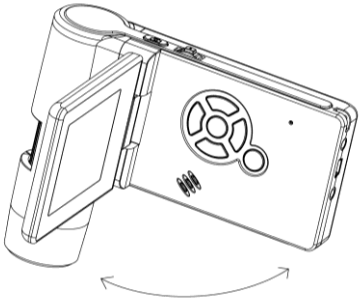


ICON	Meaning
	Still image capture (photo)
	Timer capture
	Number of captured images/total qty that could be captured (based on the current resolution)
	MicroSD memory card is inserted
	Current resolution
	Battery level indicator

Note: the display of icons can be switched on/off by pressing the zoom wheel (2) down.

4.4 Turn on the Microscope

1. Unfold the display panel, and then the microscope will power on directly.
2. If need to power on when panel unfolded, press POWER ON/OFF button.

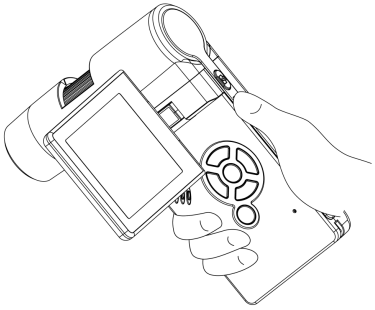


4.5 Turn off the Microscope

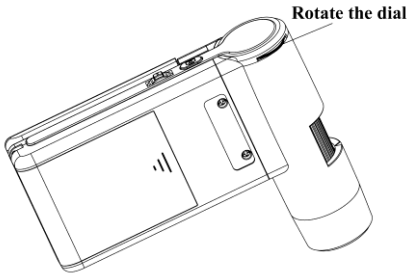
1. Fold the display panel and then the microscope will turn off automatically
2. Press the ON/OFF button
3. By Power Save. Please refer to Section 5.2.2 for Power Save setup.

4.6 How to Capture

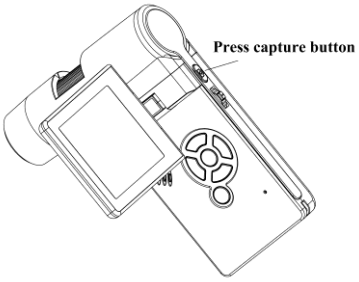
1. Turn on the microscope by simply unfolding its display panel to a proper position, normally at an angle of 90 degree with the viewing end, as follows:



2. To get a proper brightness, adjust the lighting level by rotating the LED dial.

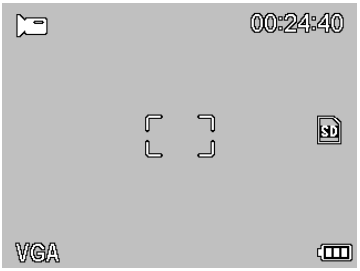


3. Hold the microscope main body with your right hand; put the viewing end closely to the object; adjust the focus wheel (11) with the left hand.
4. When a clear image is displayed press the Capture button one time.



4.7. Record Video

1. Press LEFT/BACK (19) to enter the video mode. There is video icon shown in the top left corner.

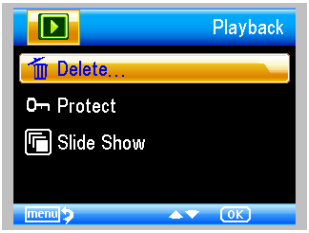


2. Press Capture button (1) to start recording video. Press again to stop.

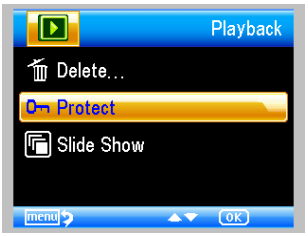
4.8. Play Back

1. Press LEFT/BACK (19) to enter the play back mode. There is 'play' icon shown in the top left corner.

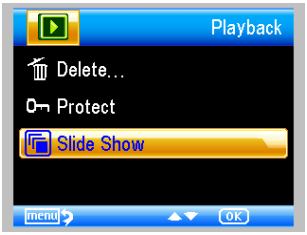
2. Press UP/DOWN to select among the captured pictures and video clips.
3. Delete:
   At play back mode, press to enter the sub-menu, then confirm delete.



4. Protect
   At play back mode, press to enter the sub-menu, then confirm protect pictures from being deleted as shown underneath:

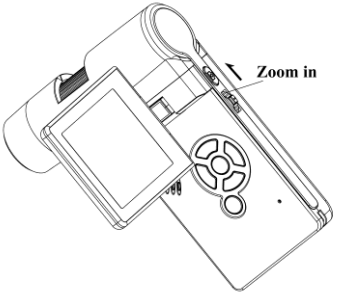


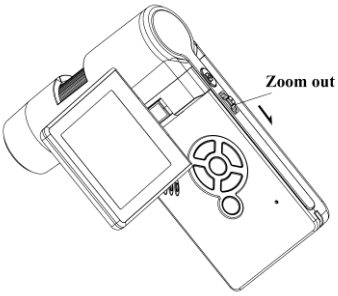
5. Slide Show
   At play back mode, press to enter the sub-menu as shown underneath; then select interval time and confirm by pressing OK.



6. Color mode
   At preview status, press to switch among Color/Positive/Negative.

7. **Zoom in/out:** push the Zoom Wheel upward to digitally zoom in and pull the Zoom Wheel downward to digitally zoom out again.





Note: the digital zoom ranges from 1x – 2.5x

4.9 Download data to a computer

1) Connect the microscope to computer by USB cable.
2) Choose Mass Storage and then you can view stored photos & videos.

4.10 Preview on a computer

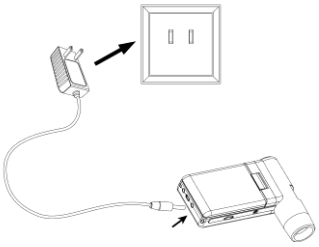
1. Connect the microscope to a computer with the supplied USB cable.
2. Choose the PC Camera mode
3. Start the MicroCapture software. Please refer to Part II on how to use the microscope by MicroCapture software.

Note: when working on computer, the button functions are no longer valid, but most of functions are available by MicroCapture software.

4.11 Charge the battery

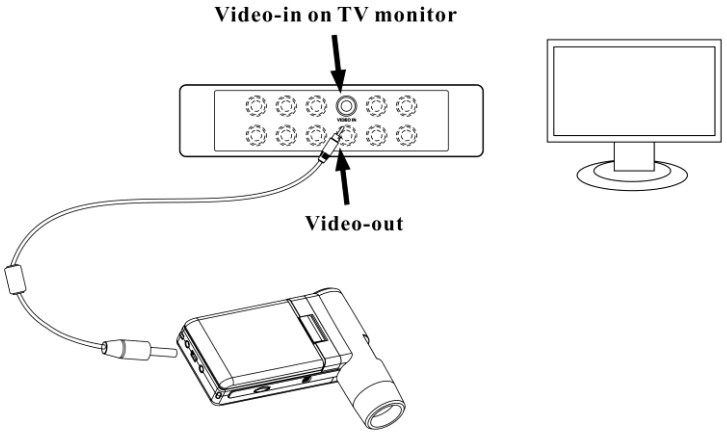
Before using the microscope the 1st time the battery must be fully charged.

1. Plug the small end of the power adaptor into the DC-in port, located on the bottom side of the DigiMicro. Then plug the other end of the power adaptor into a standard AC outlet. The battery indicator at the DigiMicro will light-up red to show that the battery is charging.



2. When the battery is fully charged, the battery indicator LED will be off. Unplug the charger.
3. You can now use your microscope for up to four hours of continuous use. When the battery level is low, there will be low-power indicator on the bottom right corner of the display, the lighting LEDs at the front will become weak and the image quality becomes poor. Recharge the battery.

4.12 Connect to a TV



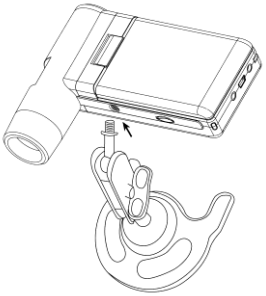
1. Insert the 1/8-inch plug on the end of the supplied video cable into the microscopes Video port.
2. Insert the RCA plug on the video cable into one of your television's yellow video input connectors. Refer to your television's manual for more information on locating these connectors.
3. Turn on the television. If necessary, switch your television to the appropriate input channel. Items that you magnify appear on the television screen.

4.13 Mount Tripod

Put the stand end with screw toward the mount hole on the microscope properly and rotate the end into the hold carefully.

Do not force the end into the hole; forcing may damage the microscope.

Adjust the height of the stand at a proper position.



5. Menu Introductions

5.1 Main Menu - Image

Press to enter the main menu.

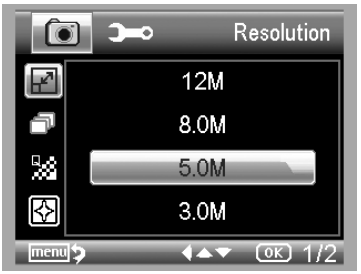
Here you can setup:

- Resolution
- Timer
- Quality
- Sharpness.

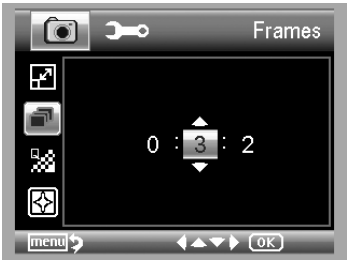
5.1.1 Set Resolution

From the main menu, choose Resolution and then select a resolution between 3M/5M/8M/12M.

Press OK to confirm selection.



5.1.2 Timer



From the main menu, choose Timer and then enter Timer setup:

Frames: input quantity of frames you want to take by UP/DOWN and LEFT/RIGHT.

The example in the picture means 32 frames.

Interval: input interval time between frame capture by UP/DOWN and LEFT/RIGHT.

The example in the picture means an interval time is 15 seconds between each two captures.

1. Press OK to confirm selection and press BACK (19) to preview the status. Then press the Capture button (1) to start the auto capture. When at auto capture status, there is the icon at the top left corner of the screen.
2. When all frames captured, microscope will return to normal preview.
3. If you need to stop auto capture during the capture process, press Capture one time.

5.1.3 Quality

From the Main Menu - Image, choose Quality and then select among Super Fine/Fine/Normal.

The three selections will result in different image compress ion ratios.

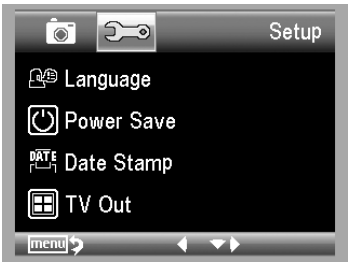
5.1.4 Sharpness

From the Main Menu - Image, choose Sharpness and then select among Super Fine/Fine/Normal.

5.2 Main Menu - Settings

Press to enter the Main Menu - Image and then press LEFT to enter Main Menu – Settings.

Here you can setup Language/Power Save/Date Stamp/TV Out/Date and Time/Format SD/System Reset/Version.

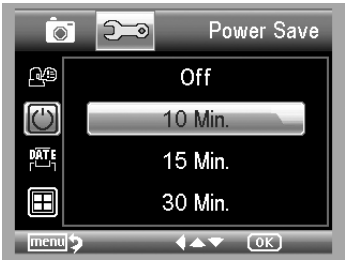


5.2.1 Language

From the Main Menu - Settings, choose Language and then select a language by pressing the UP/DOWN keys and OK to select.

5.2.2 Power Save

From the Main Menu - Settings, choose Power Save to select the time in minutes that the DigiMicro waits to switch off after the last key was pressed. The option"Off" means that the instrument does not switch off automatically, but that it needs to be switched off manually.



5.2.3 Date Stamp

From the Main Menu - Settings, choose Date Stamp to blend in stamp with the Date and/or Time in every image.

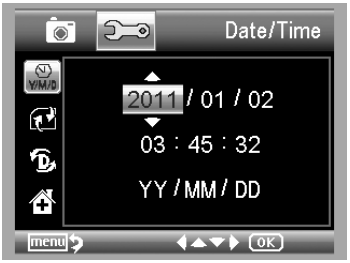
- Date/Time: mark both date and time on the images taken.
- Date: only the date will be marked
- Off: No date or time info will be marked on the images taken.

5.2.4 TV Out

From the Main Menu - Settings, choose TV Out and then select between NTSC or PAL, whatever is compatible with the used TV.

5.2.4 Date/time

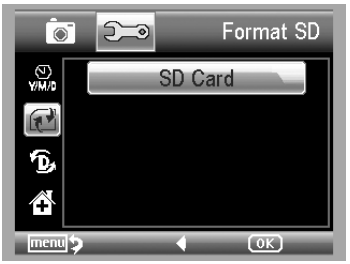
From the Main Menu - Settings, choose Date/Time to setup date and time of the DigiMicro.



1. Setup date and time by LEFT/RIGHT/UP/DOWN
2. Choose a date format;
   YY/MM/DD or DD/MM/YY or MM/DD/YY.

5.2.5 Format SD (memory card)

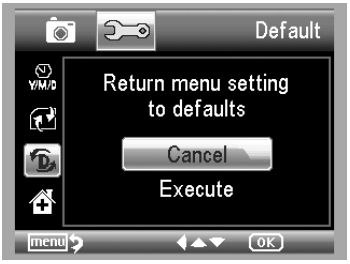
From the Main Menu – Settings, choose Format SD to format the MicroSD card inserted.



Note: a new SD cards needs to be formatted first, otherwise no pictures can be stored!

5.2.6 System Reset

From the Main Menu - Settings, choose Sys. Reset to reset the system back to its factory default settings.



All user settings will be overwritten!

5.2.7 Version

From the Main Menu - Settings, choose Version to view the current machine version.

6. Specifications

Image sensor:	5M high quality Image Sensor
Magnifications:	20x-200x-(optical), up to 500x (digital)
Resolutions:	12M, 8M, 5M, 3M
Lens:	High quality microscopic lens
Display:	3inches TFT panel, 4:3 ratio
Light sources:	8 LEDs with adjustable brightness
Power sources:	Li-ion 3.7V / 800mAh battery Working time: 4 hours; Charging time: 5 hours
Frame rate:	30fps
Adaptor:	Input:100-240V, 50/60Hz; Output: 5V, 1A
OSD languages:	English/Germany/French/Spanish/Italian/ Portugese/Japanese/Chinese
Software languages:	English/Germany/French/Spanish
Measurement:	By the software
Size:	130x103x29mm
Weight:	195 gram (with battery)

7. Computer System Minimum Requirement

Operating system	Windows XP SP2/Vista/Win7, Mac 10.5 or above
CPU	Pentium 11 or above
RAM	256MB
Interface	USB port2.0

8. Troubleshooting

Problems	Solution
The unit does not turn on.	Charge the battery.
The screen is blank.	▪ Ensure that the power is on. ▪ Charge the battery. ▪ Verify that the item you want to magnify is positioned correctly under the lens.
There are smudges or blemishes on the screen	Clean the screen and lens carefully with soft fabric
Microscope is connected to a television, but no image appears on the television screen.	▪ Ensure that the television is on. ▪ Switch to the appropriate video input channel on your television. ▪ Ensure that the video cable is securely connected to the Microscope Video-out port and plugged into the correct video input on your television.
The battery indicator LED is not in red, even though the power adaptor is connected and plugged into a wall socket. -or- The battery is not charging.	Plugged into the Microscope's DC-in port. Ensure that the outlet has power and is not malfunctioning. If the outlet is connected to a wall switch, make sure that the switch is on.

PortableCapture Software Introduction

Computer System Requirements

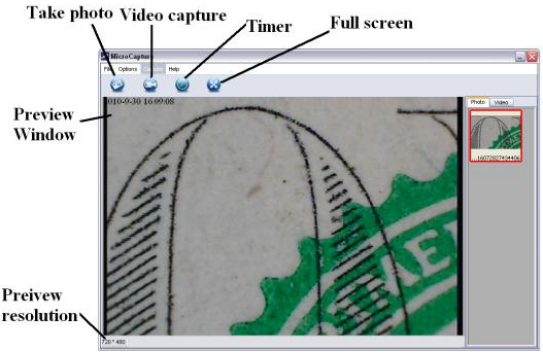
- Windows XP/VISTA/WIN7 & Mac
- P4 1.8 or above
- RAM: 256M
- Video Memory: 32M
- USB port: 2.0
- CD-ROM Drive

1. Install Software

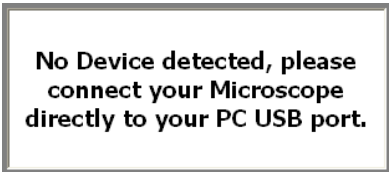
1. Insert the driver CD into CD-ROM Drive and this will automatically display the following interface:
2. Click ***MicroCapture software*** and then reboot the system when asked.
3. You can browse the User's manual in PDF format and the CD contents by choosing the corresponding menus.

2. Start Microscope

Connect your Microscope to your PC USB port, start the software by clicking the MicroCapture icon (generated on your desktop after installation) and you will see the following screen pop up.



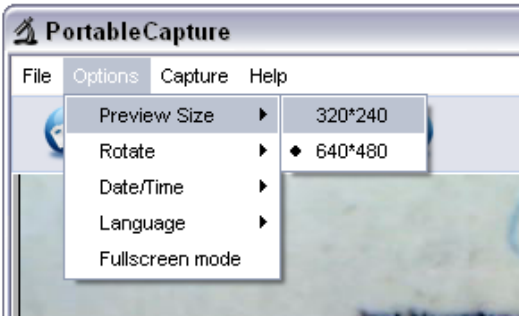
When the Microscope is disconnected from your PC USB port, the screen will display "***No Device detected, please connect your Microscope directly to your PC USB port***."



3. Software Introduction

3.1 Preview Size

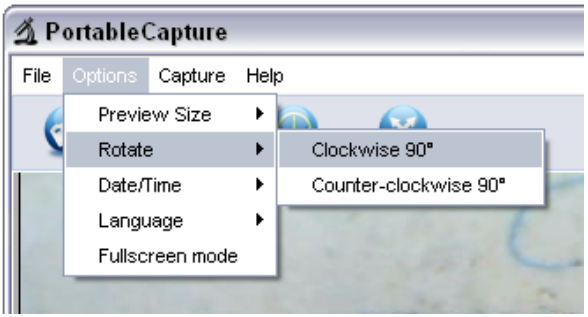
You can change the preview size in the following way:



Note: the size of the photo taken is equivalent to the preview size selected in the Options menu/Preview Size.

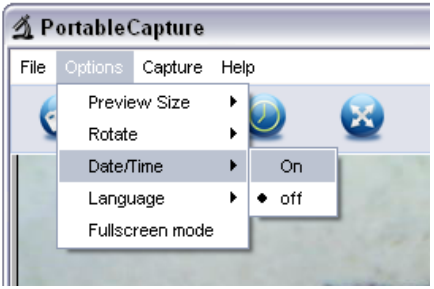
3.2 Rotate Image

You can rotate the output image clockwise and counter-clockwise.



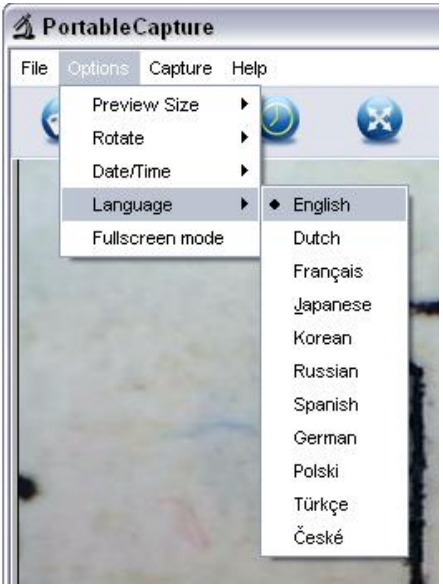
3.3 Date/Time

You can display or turn off Date/Time by the following operation:

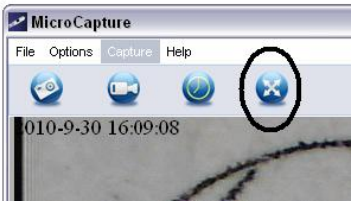


3.4 Language

You can choose the On-Screen-Display language by the following operation:



3.5 Full screen



You can enter & quit full screen mode by:

a) Double-clicking the preview area.

b) Clicking the full screen icon

c) Choose ***Full screen mode*** from the options menu.

When in full screen mode, click on the Full screen icon to turn off and restore toolbars and menus.

3.6 Capture

1. Direct Photo capture

You can take photos by either of the following ways:

- Click the camera button
- Choose ***Capture*** and then click ***Photo***
- By pressing F11

Captured photos are saved automatically and image thumbnails will be available on the right hand side of the MicroCapture screen for further editing. For editing photos, please refer to later operations.

2. Video capture

You can record video by either of the following two ways:

- Click the video camera button
- Choose from the menu bar ***Capture*** and then click ***Video***

When recording, there is a red dot flashing on the video camera button.

Video is saved in AVI format.

Stop capturing:

- Click the flashing video camera button
- Choose ***Capture*** and then click ***Stop capturing***

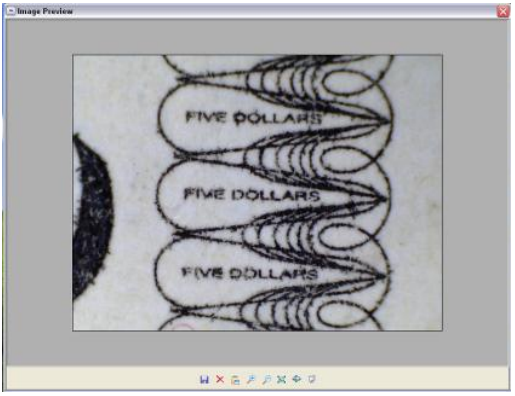
Note: please note the best resolution for video capturing is 640x480.

3.7 Edit Photos

a. Preview photos

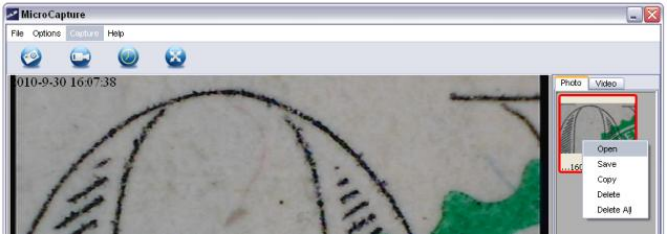
Clicking on an image thumbnail will display the image selected on the preview area, with its size displayed on the left-bottom corner.

You can double click the image thumbnail and an independent preview box will pop up as shown here:

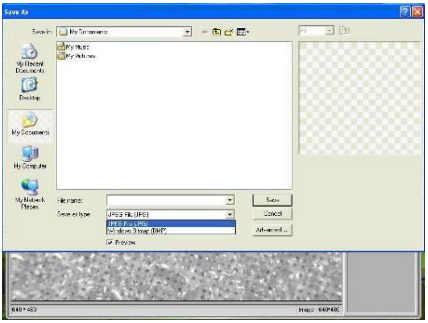


b. Save Photos

You can save photo by right clicking on the thumbnail and then choose ***Save***.



The file can be saved as either jpeg or bmp format.. The jpeg size in which the photo is saved is the maximum allowed for jpeg. You can choose to decrease the size by adjusting the quality. Click the Advanced button to view and select jpeg save options.



c. Delete photos

Delete photos by right clicking and then choosing ***Delete***, you can delete the selected photo.

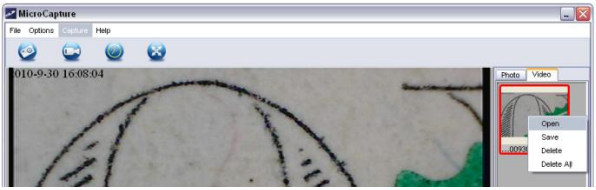
At the independent preview box you can choose the delete icon to delete the previewed photo.

d. Copy photos

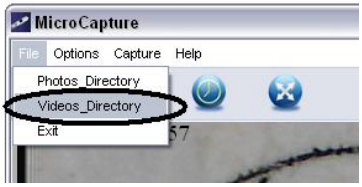
Right click on the thumbnail and then choose ***Copy***.

3.8 Edit videos

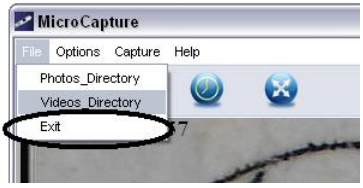
You can right click the video small icon listed on the right column and then choose ***Play***, ***Copy***, and ***Delete*** etc.



To save video clips directly:



Quit MicroCapture

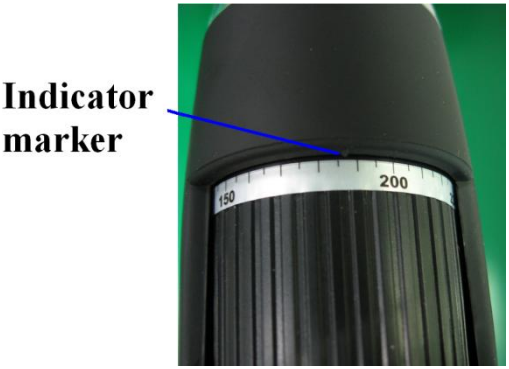


4. Measurement in a picture

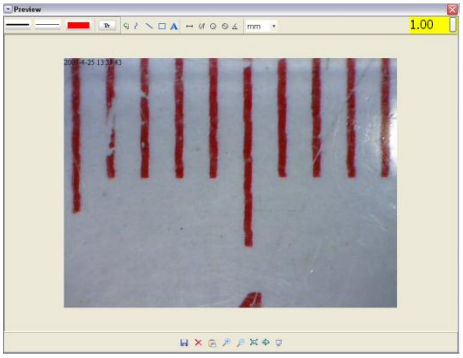
1 Point the microscope to a target object, for example a ruler; rotate the focus wheel to get a clear focus.

2 When the focus is at its best, take a snapshot.

3 Watch the calibration at the lower-end of the focus wheel; note/write down the magnification value that corresponds to the indicator marker on the microscope body as shown below.
That value is the magnification at which the focus was set and the image taken. (This is very important, since only with the known magnification ratio the object size can be worked out during the following steps!)



4 Open the captured photo by double clicking on the thumbnail.
A preview window will open

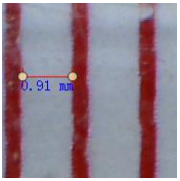


5 Input the noted magnification ratio into the box at the top right corner of the preview window. Continuing without the used magnification ratio is meaningless!

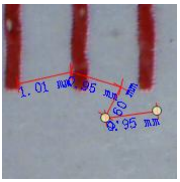
Now you can measure the size of the whole or part of the object you have taken using the available options. Click on the icons on top of the window.

Following are the options:

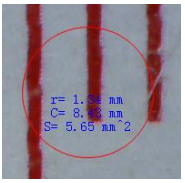
1) Straight / direct line: click , left-click mouse to choose a start point and drag the mouse to an end point, Notice that the measurement is displayed. Release the mouse when done.



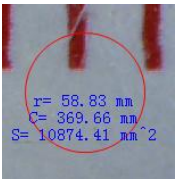
2) Multi-line: click , left-click mouse to choose a start point and drag to an end point. Notice that the measurements are displayed as you go along. Release mouse when done. You can continue measuring from the previous end point to a next point and so on.



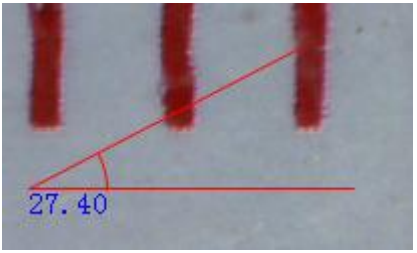
3) Circle-radius: click , left-click to choose a start point for a circle; draw the circle to an end point, release the mouse, and the radius of the circle will be displayed.



4) Circle-diameter: click , left-clicking to choose a start point for a circle; draw the circle to an end point, release the mouse, and the radius of the circle will be displayed.



5) Angle: click , left-click to choose a start point for an angle, draw the line to another point and then release the mouse to create one line for an angle. Move your mouse to bring out another line of the angle, left-click when the angle is ok. The angle value will then display.



6) Unit: click mm and you can choose the unit at which the measured values are displayed. Units available include: pixels / inches / km / m / cm / mm / micrometer

7) Other operations you can carry out on the photo taken include:

   1) : make notes on the photo taken

   2) : select font, font style, font size etc

3) : draw line, box etc on the photo

4) : line color

5) : line thickness

6) : line type

7) : undo operation

Note:

1. The magnification ratio you are allowed to input is from 20 to 200. Do not input any value beyond that.
2. The measurement value worked out by the software is only for reference; it may not be 100% correct.
3. The measurement function is only available on computers with the Windows Operating System.

This symbol on the product or in the instructions means that your electrical and electronic equipment should be disposed at the end of its life separately from your household waste. There are separate collection systems for recycling in the EU.

For more information, please contact the local authority or your retailer where you purchased the product.